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	277	293
SL3-2	(199) ASKAWGLRLYRSTRTDP	
MCF-247	(199) GPKVWGLRLYRSTGIDP	
MCF CI-3	(199) GPKVWGLRLYRSTGTDP	
Ampho-MCF	(199) GPKVWGLRLYQSTGIDP	
ERV-1	(199) GPKVWGLRLYRSTGTDP	
Endogenous from 129 GIX+ mice	(199) GPKVWGLRLYRSTGTDP	
Friend MCF #2	(199) GPKVWGLRLYRSTGTDP	
Friend MCF	(199) GPKVWGLRLYRSTGIDP	
Friend SFV	(199) GPKVWGLRLYRSTGTDP	
Invitro MCF	(199) GPKVWGLRLYRSTGTDP	
MCF 1223	(199) GPKVWGLRLYRPTGTDP	
MLV DBA/2	(199) GPKVWGLRLYRSTGTDP	
MCF (Broscius)	(199) GPKVWGLRLYQSTGIDP	
Mo-MCF	(199) GPKVWGLRLYRSTGIDP	
Ns-6(186) MCF	(199) GPKVWGLRLYRSTGIDP	
Rauscher sfv	(199) GPKVWGLRLYRSTGTDP	
R-XC-	(199) GPKVWGLRLYRSTGTDP	
MCF (Ter-Grigorov)	(199) GPKVWGLRLYRSTGTDP	
AKV	(252) TGHWWGLRLYVS-GHDP	
Friend	(237) IGHYWGLRLYVS-GODP	
Moloney	(234) TGHYWGLRLYVS-GODP	
SL3-3	(252) TGHWWGLRLYVS-GHDP	
Friend fass	(237) TGHYWGLRLYVS-GRDP	
10A1	(209) GPKSWGLRLYRT-GTDP	
4070A	(209) GPKSWGLRLYRT-GTDP	
Xeno CWM-S-5X	(202) APKVWGLRLYRSTGADP	
DG-75 Xeno	(202) APKVWGLRLYRSTGADP	
Xeno NZB-9-1	(202) APKVWGLRLYRSTGADP	
Xeno Bxv-1-related	(202) APKVWGLRLYRSTGADP	
Xeno R-MCF-1	(202) GPKVWGLRLYRSTGTDP	
Consensus	(277) GPKVWGLRLYRSTGTDP	

Fig. 1

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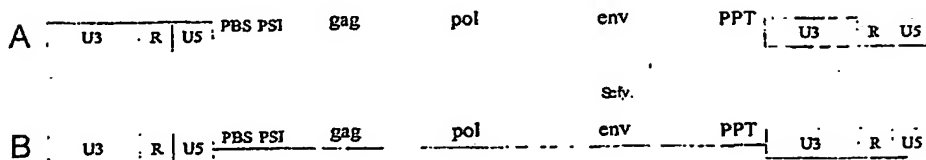
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		Section 1									
		(1)	10	20	30	40	50	60	70	80	90
SL3-2	(1)	MEGPAFSKPLKDKINPWGPLIVL	GILMRARVSVQI	DSPHQVFNVTWRVTNL	MTGQTANATSL	LGT					
MCF-247	(1)	MEGPAFSKPLKDKINPWGPLIVL	GILTRAGVSVRHDS	PHQVFNVTWRVTNL	MTGQTANATSL	LGT					
Leader											
		Section 2									
		(66)	66	80	90	100	110	120	130	140	150
SL3-2	(66)	MTDAFPKLYFDL	CDLIGDDWDET	GLGCRTPGGR	KRARIFDFYV	CPGHTVLAGCGG	PPREGYCGKWG				
MCF-247	(66)	MTDAFPKLYFDL	CDLIGDDWDET	GLGCRTPCORK	RARTFDFYV	CPGHTVPTGCGG	PPREGYCGKWG				
VRA											
		Section 3									
		(131)	131	140	150	160	170	180	190	200	210
SL3-2	(131)	CETTGQAYWK	PSSSWDLISL	KRGNTPKG	QGPCYDSS	SVSSAQQAT	PGGRCNPLV	LEFTDAGKRA			
MCF-247	(131)	CETTGQAYWK	PSSSWDLISL	KRGNTPKG	QGPCYDSS	SAVSSDIK	GATPGGRCNPLV	LEFTDAGKRA			
VRB											
		Section 4									
		(196)	196	210	220	230	240	250	260	270	280
SL3-2	(196)	SWDASKAWGL	RLYRSTR	TDVTRFSL	TRQVLNIG	PRVPIGPN	PVITDQL	PPSRPVQIML	PRPPQP		
MCF-247	(196)	SWDQPKVWGL	RLYRSTR	GIDVTRFSL	TRQVLNIG	PRVPIGPN	PVITDQL	PPSRPVQIML	PRPPQP		
VR3											
		Section 5									
		(261)	261	270	280	290	300	310	320	330	340
SL3-2	(261)	PPFGAASTVP	PETAPPSQ	QPGTGDRLL	NLVNGAYQ	ALNLTSPDK	TQECWLCV	LGPPYYEG	VAVLG		
MCF-247	(261)	PPFGAASTVP	PETAPPSQ	QPGTGDRLL	NLVKQALNLT	SPDKTQECWLCV	LGPPYYEG	VAVLG			
		Section 6									
		(326)	326	340	350	360	370	380	390	400	410
SL3-2	(326)	TYSNHTSAP	ANC SVASQ	HKLTLSE	VTTGQGLQ	IGAVPKTHQ	ALCNTTQ	TSNGSYLA	APAGTIWA		
MCF-247	(326)	TYSNHTSAP	ANC SVASQ	HKLTLSE	VTTGQGLQ	IGAVPKTHQ	ALCNTTQ	TSNGSYLA	APAGTIWA		
		Section 7									
		(391)	391	400	410	420	430	440	450	460	470
SL3-2	(391)	CNTGLTFC	ISTTILDL	TTDYCVL	VELWPRV	TYHSPGYV	GQFEETKY	KREPVS	LTALLL	GGLT	
MCF-247	(391)	CNTGLTFC	ISTTILDL	TTDYCVL	VELWPRV	TYHSPGYV	HQFERRAKY	KREPVS	LTALLL	GGLT	
		Section 8									
		(456)	456	470	480	490	500	510	520	530	540
SL3-2	(456)	MGGTAAGV	TGTTALV	ATQPPQ	LQAAMQ	DDLKEVE	KSITNLE	SLTSLSE	VVLQNR	RGLDLL	FL
MCF-247	(456)	MGGTAAGV	TGTTALV	ATQPPQ	LQAAMQ	DDLKEVE	KSITNLE	SLTSLSE	VVLQNR	RGLDLL	FL
		Section 9									
		(521)	521	530	540	550	560	570	580	590	600
SL3-2	(521)	KEGGLCAAL	KEECCFY	ADHTGL	VRD	SMALRER	LSQRQKL	FESQGW	FEGLFN	KSPWFT	TLISTI
MCF-247	(521)	KEGGLCAAL	KEECCFY	ADHTGL	VRD	SMALRER	LSQRQKL	FESQGW	FEGLFN	KSPWFT	TLISTI
		Section 10									
		(586)	586	600	610	620	630	640	650	660	670
SL3-2	(586)	MGPLIILL	LLILLL	FGPCIL	NHLVQ	FKDRVSV	VQALVLT	QQYHQL	KTIED	CESRE	
MCF-247	(586)	MGPLIILL	LLILLL	FGPCIL	NRLVQ	FKDRISV	VQALVLT	QQYHQL	KSIPE	EVESRE	

Fig. 2

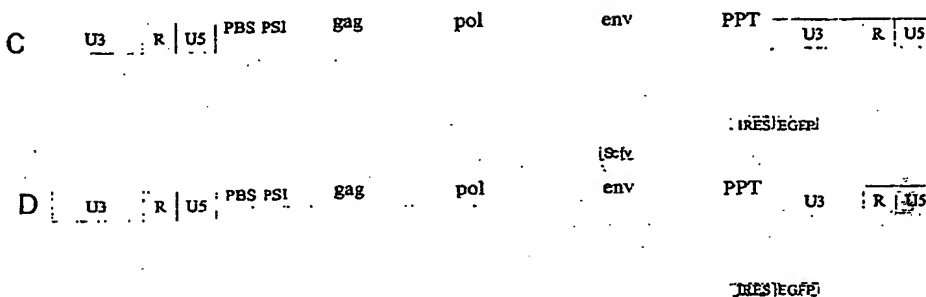
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### Replication competent virus

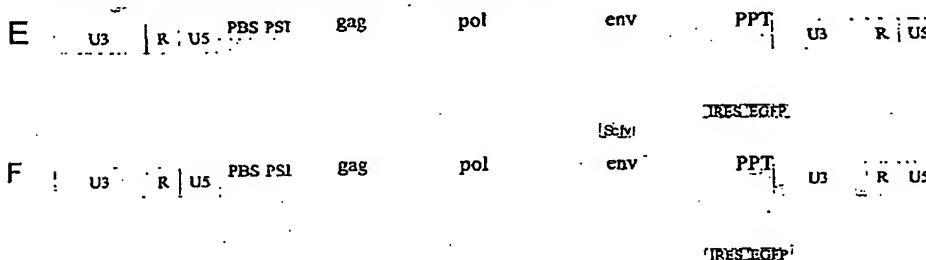


### Replication competent vector

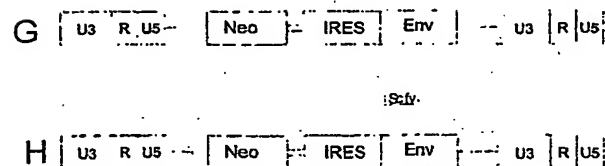
#### U3 type of maxivirus



#### 3Prime untranslated type of maxivirus



### A retroviral expresion vector containing envelope (Minivirus)



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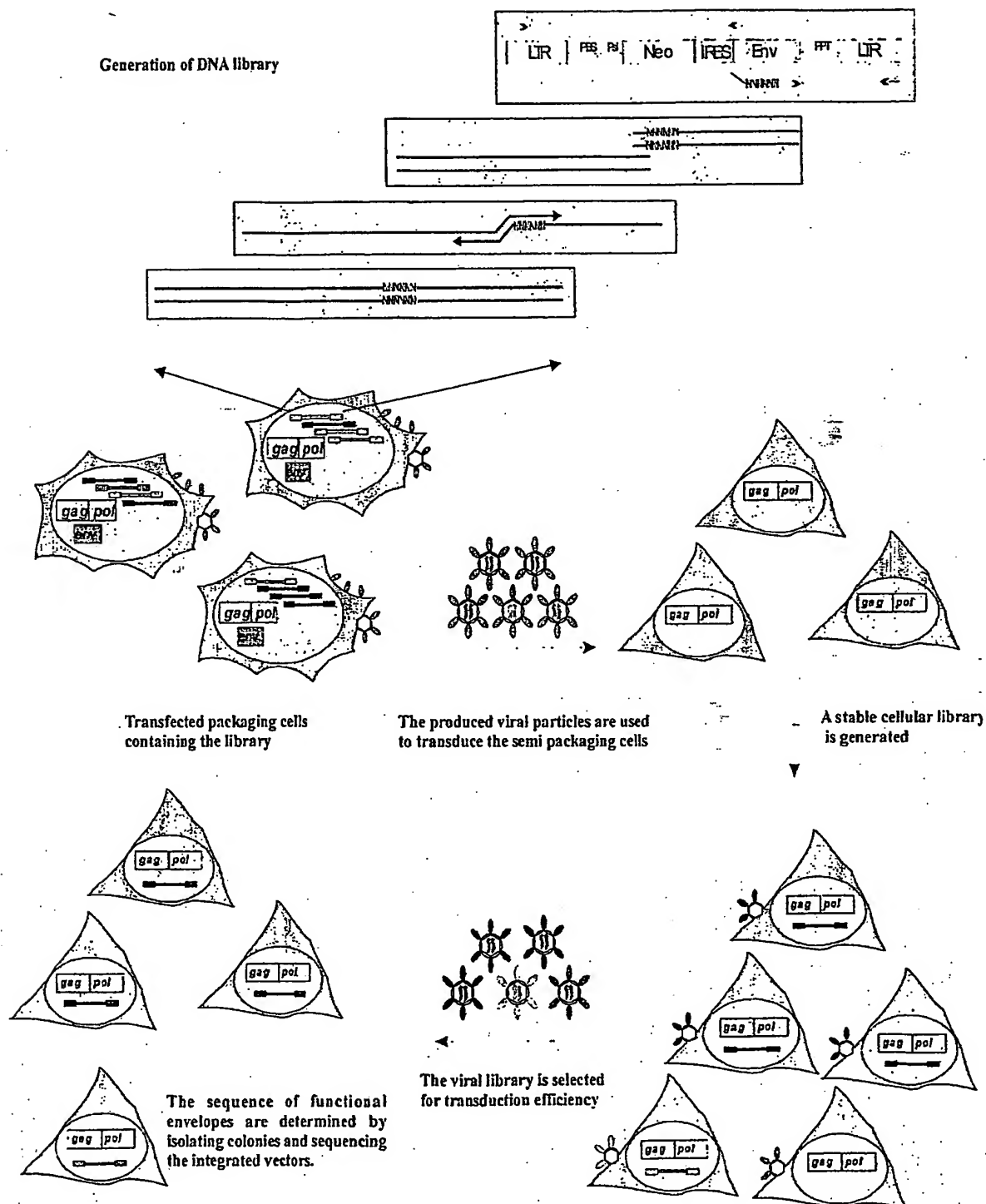


Fig. 3

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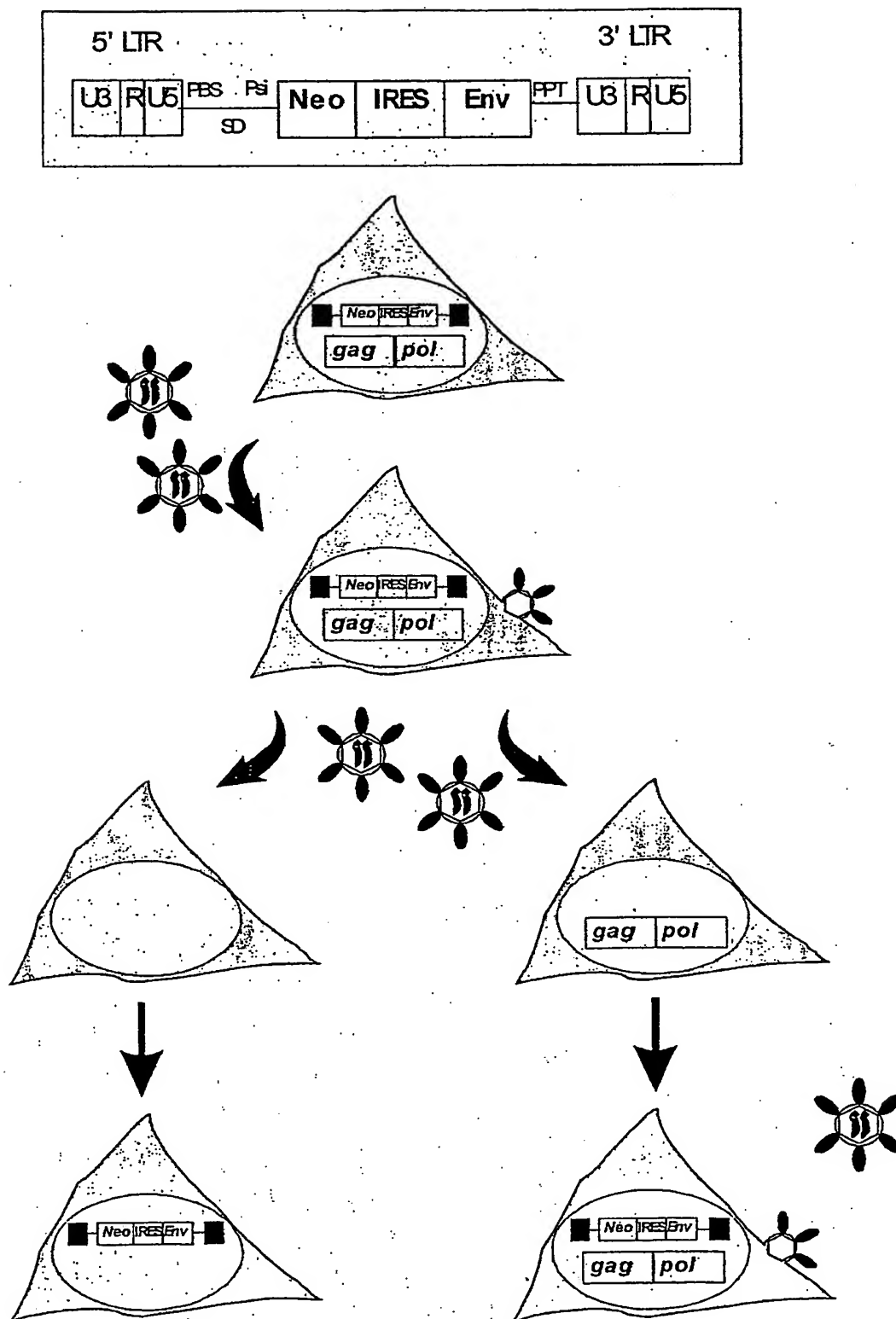


Fig. 5

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## The genomic structure of minivirus

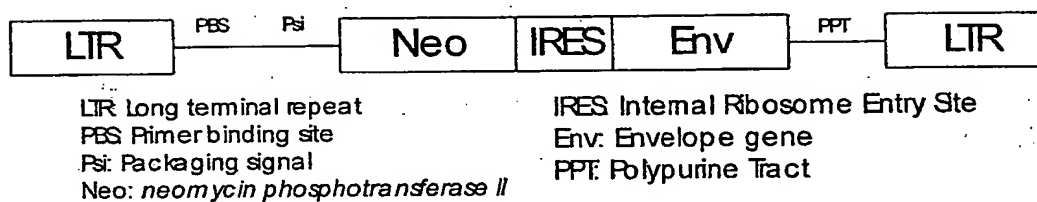


Fig. 6